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1951

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EDITORIAL



Are We Satisfied With What We Have?

"Success in life consists of getting what you want and being satisfied with it."—Sir Wm. Osler.

Can we assume today that we have what we want from our hobby and are satisfied with it? Can any one of us say we have achieved the ultimate in equipment; achieved the transmitter we always wanted; the layout of our station as we always wanted it; the receiver, the aerial system, the hundred and one little "gadgets" and simple pieces of equipment which together makes the pursuit of our hobby so pleasant? It is considered that few of us have reached the stage of being satisfied with what we have, but—and it is a big "but"—we are always doing something about it from the technical aspect.

On the other hand, what of the Institute that has, for twenty-five years, fought our battles so that we could conduct our hobby under the conditions we do today? Are we satisfied that we have taken advantage of everything the Institute can give us? And if we are satisfied, are there not a lot of things we could do ourselves to assist others to reach the same stage of satisfaction?

It is considered there are! It is considered that with a hobby like ours, we could all help each other a lot more than we do. It is considered

that this Institute can give us a lot more than we have permitted it to give us.

Why don't we let it give us more? Why don't we help it to give us more? Why don't we take more interest in its activities—its meetings, its conventions, its technical facilities, its organised contests, its administration?

Why is it that a few will always do our work for us and we will stand by and let them? Why? Why? Why? There are a thousand "why's" we could ask. But could we stop asking this question? Could we, instead, say we are doing this—we are doing that—we are doing something to assist the administration of the Institute? Could we, in the future, look back and say we did our "little bit" to assist our Institute, thereby helping others to reach the same stage of satisfaction we have ourselves apparently reached?

Can we say NOW that we are going to get together and support the Institute that has afforded our hobby so much? Can we take stock of ourselves and say we could set aside a little time to help our Institute, and in so doing, help ourselves and our fellow Amateur? Or . . .

Are we satisfied with what we have?

—FEDERAL EXECUTIVE.

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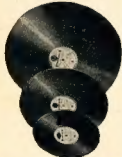
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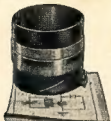
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MOBILE MODULATOR

In July, 1950, issue of "Amateur Radio," the cathode follower system of driving zero bias 807s in Class B was described. The main advantage was the saving in current consumed in the driver, and the use of an ordinary Class A transformer.

Here is the circuit of a Mobile Modulator from "Ham News," July-Aug., 1950, using this principle, which is capable of giving nearly 10 watts of audio, and using the cathode follower driver, but without the driver transformer.

This modulator was designed to modulate a final running at 300 volts and 60 Ma., with both modulator and r.f. section fed from a 300 volt 100 Ma. vibrator supply, operating from a 6 volt car battery.

This unit should prove ideal for that Emergency Rig as it is possible to build it in a 4" x 5" x 6" cabinet.

As can be seen above, the average plate current available for the modulator is 40 Ma., if the complete Emergency Rig is to operate from a 100 Ma. vibrator supply and the r.f. stage consumes 60 Ma. of that total.

In typical Amateur practice, where push-pull Class AB 6V6 tubes are used as modulators, this figure of 40 Ma. would barely provide static current for one of the modulator tubes. Also, considering, normal output transformer efficiencies, this 6V6 type of set-up would be hard pressed to provide 10 watts of audio output.

Other experimenters, striving for a low-drain modulator design, have gone to Class B modulators, realizing that this type of operation gives the lowest static current possible. (For a given peak audio power output the peak d.c. plate current to the modulator stage is relatively fixed, regardless of the type of operation. However, when considering speech waveforms, this peak value of plate current is of secondary importance; the average value of d.c. plate current is relatively low compared to the peak value.)

For example, the 6N7 in Class B service is rated at about ten watts output, and the average plate current required is in the order of 35 to 40 Ma. The driver required for this 6N7 would usually consume another 10 or 15 Ma. This arrangement is a considerable improvement over the Class AB 6V6 approach, but falls seriously short of our 40 Ma. average current objective.

The problem was, therefore, to achieve further economy in both the modulator stage and the driver. The ideal Class B tube for this service was found where it was least likely to be suspected—in the miniature tube line.

Strange as it seems, the 12AU7 will give a peak speech output of well over ten watts and, stranger still, at a distortion level well under that accom-

plished by a Class B operated 6N7, despite the fact that the 6N7 was originally designed for zero bias Class B operation.

The static (resting) current of the 12AU7 in Class B with 300 volts on the plate is approximately 15 Ma!

Further economies in both current and weight can be realized in the driver stage by employing a device already well known to readers of "A.R." By using a cathode coupled driver operated Class B no driver transformer is required and the driver itself adds only another 5 Ma. drain to the power supply.

The net effect of this design is a high-quality modulator (including a voltage amplifier stage drawing less than a Ma.) that has a static drain of approximately 20 Ma.

ELECTRICAL DETAILS

With reference to the circuit diagram, Fig. 1, it will be noted that the entire modulator is push-pull throughout. Inasmuch as the Class B stage and driver must be push-pull, it was deemed desirable to carry this through to the input circuit in the same fashion, to avoid a phase inverter and to simplify construction. Note that only three condensers and eight resistors are used in the entire unit.

A bias battery is specified in order to provide the proper grid bias voltage for the 12AU7 modulator and the 12AT7 driver. Under zero-signal conditions, the bias voltage from either pin 2 or 7 of the 12AU7 to ground will be 15 volts, and the voltage measured across either R7 or R8 (the bias for the 12AT7 driver) will be 7 to 8 volts, when a 22.5 volt bias battery is used.

Note that the cathode current for the 12AT7 driver flows through the bias battery, and therefore this battery ac-

tually supplies a current in the order of a few milliamperes. In other words, the current does not tend to charge the battery, as in the usual bias case, but instead, tends to discharge it. However, this current is so slight that normal shelf life may be expected from the battery. This battery has no drain on it during stand-by or complete off periods, as current is drawn from it only when high voltage is applied to the modulator.

The first 12AT7 tube acts as a push-pull voltage amplifier. Because carbon microphones have a wide variation in output voltage, this first stage was added so that adequate gain would be available regardless of the microphone used.

Voltage for the microphone is obtained from the car battery, and a single shielded lead is used to provide filament voltage and microphone voltage. This lead should be made of heavy wire to avoid ohmic loss due to the filament current, and it should be shielded to prevent undue noise pick-up.

Potentiometer R1 (actually connected as a rheostat) serves as a gain control. Because it can only change the microphone current a small amount, it does not have a wide range of control, but it is useful for adjusting the level when different people use the microphone.

If the microphone has too much gain, it will be necessary to increase the value of R1, or add a fixed resistance in series.

A phone-c.w. switch is provided which removes all high voltage from the modulator and shorts the secondary of the output transformer when the switch is in the c.w. position.

An external switch must be provided to turn the filament circuit on and off. With the circuit shown this switch will also shut off the mike current. Some microphones incorporate switch contacts which may be used to control a relay for power switching. There are many possible control schemes and the refinements of the control system are left to the individual.

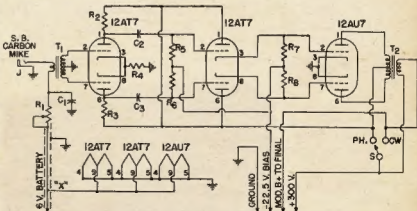


Fig. 1.—Circuit diagram of the Mobile Modulator.

- C1—500 uF. 15 volt electrolytic.
- C2, C3—1000 pF. 500 volt ceramic or mica.
- J—Open circuit jack.
- R1—250 ohm potentiometer.
- R2, R3—0.1 megohm, $\frac{1}{2}$ watt.
- R4—2200 ohm, $\frac{1}{2}$ watt.
- R5, R6—0.47 megohm, $\frac{1}{2}$ watt.
- R7, R8—10,000 ohm, $\frac{1}{2}$ watt.
- S—P.D.T. toggle switch.
- T1—S.B. mike to push-pull grids.
- T2—Output transformer (see text).

(All resistors and capacitors $\pm 20\%$ tolerance unless specified otherwise.)

CONSTRUCTIONAL DETAILS

The general nature of the mechanical work is shown in Fig. 2. All of the parts, with the exception of the switch, are mounted on a piece of flat metal measuring $4\frac{1}{2}$ " x $5\frac{1}{2}$ ". The spacers which support this piece are $1\frac{1}{2}$ " long.

Fig. 2 indicates how the parts are mounted on the flat chassis.

The shaft on resistor R1 is left long enough so that it projects through the front panel. The input jack is mounted on the chassis and a large hole cut in the front panel so that a mike plug can pass through. The switch is mounted on the front panel and the leads going to it are left a little long, so that the chassis can be removed easily from the front panel.

The front panel is one of the removable 5 " x 6 " sides of a standard 4 " x 5 " x 6 " cabinet.

COMPONENTS PARTS

There are no critical components used in the Mobile Modulator and all parts may be plus or minus 20%, as indicated under circuit constants.

One part is worth discussing in more detail, however, and that is the output (modulation) transformer. Fundamentally, all that is required is a transformer with a primary plate to plate impedance of approximately 12,000 ohms and a secondary impedance of approximately 6,000 ohms. This latter figure assumes that the modulator will be used with an r.f. final where the plate voltage on the final is 300 volts and the final plate current is about 50 Ma.

The prime consideration in choosing an output transformer for the Mobile

Modulator are size, weight, efficiency and cost. A designer's concern over size, weight and cost is obvious, although concern over efficiency might not be.

If a transformer has a loss of 3 db. (and this is not unusual) then one-half of the audio power is lost in the transformer. In other words, if 12 watts could be obtained out of the tubes in a modulator stage, then only six watts

of distortion to the output signal. While the efficiency depends upon the primary to secondary coupling, the distortion is controlled largely by the tightness of the coupling between the two halves of the primary winding.

Obviously, any transformer of the proper impedance and power rating will serve, within the limitations mentioned, as T2.

TESTING

There is very little that need be done when the unit is finished. As mentioned previously, it would be wise to check the bias values, and a meter reading of the resting current would also be advisable.

Do not attempt to test the modulator with signal input unless it is connected to the final, or unless a dummy load is used. A 5000 ohm, 10 watt resistor across the secondary of the output transformer will serve as a dummy load.

OTHER USES

Even though the Mobile Modulator has been designed for mobile service primarily, it will make an ideal modulator for emergency work. The power drain is small and the unit is compact and reliable.

This modulator may also be used in the home station if a change is made. Wire "X" should be disconnected from the hot lead so that the filaments may be energised by a 6.3 volt transformer. The hot lead can then go to a small 4.5 or 6 volt battery which will supply mike current.

Regardless of the use for which it is built, this high-quality little modulator should find many uses around the shack.



Fig. 2.—Rear view of the uncased Mobile Modulator.

would be available out of the transformer. This means you have only a six, not a twelve watt modulator.

In Class B systems another important but frequently overlooked consideration is that of the design of the transformer itself. An improperly designed transformer can contribute a large amount

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Mobile and Emergency Antenna

The antenna system about to be described ("Ham News," July-Aug., 1950) is, in theory, not new, but in the application end it seems to be all but unknown to the average Amateur. It is somewhat akin to the paper clip idea, being so simple yet so effective.

Antennae for low frequency mobile or emergency work normally fall in the category of pieces of wire less than a quarter-wave long. The big problem has been, and will be, how to make this short piece of wire look like a longer piece of wire.

This problem exists because normally it is easier to get efficient power transfer from final to antenna when the antenna length is an appreciable portion of a quarter-wavelength.

However, a point that most Amateurs do not fully appreciate is that, disregarding ohmic loss and directivity effects, one length of wire is as good as any other length of wire in radiating a given amount of power.

ductive to efficient radiation. But, here is an idea. Why bother trying to do a fancy matching job of getting voltage from the final tank into a network which then has to have another voltage which will produce our antenna current? Why not make the tank coil shape such that it will radiate?

This is exactly what has been done to make the antenna about to be described. In effect, a few turns of the final tank coil have been unrolled and straightened out to make a single large turn, or loop of wire. By getting this section of wire out of the tank coil, even though it is still part of the tank coil, we have caused it to become a relatively effective radiator.

THE LOOP

The best shape for this radiating piece of wire is a circular single-turn loop. Of course, this sort of antenna on, let us say the eighty metre band, is not as efficient as a properly matched half-

The antenna network is wired as shown in Fig. 3A. In this case a coaxial line is run from the transmitter to the matching network. No tricky matching stunts are involved. The short piece of wire fastens to the two feed-through insulators, C1 is tuned to resonance, and you are on the air. This arrangement is ideal for emergency work where no permanent installation is desired.

The schematic in Fig. 3B is especially for use with mobile rigs. It is identical electrically to that of Fig. 3A, but the parts have been re-arranged. The practical way to use the circuit of Fig. 3B is to mount a ten or twelve foot whip antenna on the rear bumper and connect the upper antenna lead to the base of the whip.

The top end of the whip then connects to ground. This may be accomplished by bending the whip until the tip of it reaches the rain gutter or some other portion of the car body. As before, matching is no problem. Merely tune C1 to resonance.

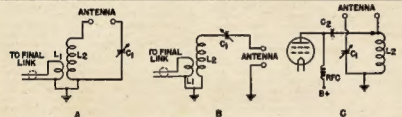


Fig. 3.—Circuit diagrams of the Mobile and Emergency Antenna.

C1—335 pF. variable.

C2—0.005uF. blocking condenser.

L2—two turns number 12 wire.

L2—eleven turns number 10 wire, 14" in diameter, wound to cover two inches (approx. 2½ microhenrys).

In other words, a one foot piece of wire would be just as effective on eighty metres as a one-hundred foot piece of wire if means were available to efficiently match its impedance.

No matter how you look at it, however, the piece of wire you are using for an antenna is the wire that serves as your radiator, so the problem becomes one of getting the most current into that piece of wire, because, other factors being equal, the more current in a radiator, the better the signal radiated.

This question of getting the most current into the wire is one involving impedance matching, and it has been discussed by practically every author of an article on mobile transmitters. Suffice it to say that the shorter the piece of wire (for a given frequency) the harder it is to get that antenna current to flow.

THE TANK COIL

At this point some of you are thinking that if this current is so important, why doesn't the final tank coil radiate, because it has just about as much current as any piece of wire in the rig? Quite true, it does radiate as some of you with t.v.i. may painfully recall.

It radiates, but not too efficiently, because the shape of the coil is not con-

wave antenna sixty feet in the air, but, on the other hand, it does do a very fine job of radiating. It has surprised many Hams who have tried it.

PRACTICAL APPLICATIONS

The length of the wire in the loop is not at all critical except that the longer it is, the better (because the ratio of radiation resistance to ohmic loss is greater). Obviously, the larger diameter conductor used, the better. The shortest piece of wire used in tests was twelve feet of number 10. This means a loop with a diameter of about three feet, eight inches. The three circuits in Fig. 3 are designed to use any length of wire from twelve feet up to a quarter-wavelength. All data given is for 3.5 to 4 megacycle operation. The data would be similar for higher frequency operation if scaled down in wavelength.

Fig. 3C shows the practical method of using part of the tank coil as the antenna. In effect C1 is across the entire tank coil. This tapping arrangement is required in order to have control of the tube loading. To load more heavily, tap the coil and vice versa to load more lightly. Note that shunt feed is used so that no positive d.c. voltage is on the antenna.

CHANGE OF ADDRESS

W.I.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."

While all of these circuits will resonate any length of wire from twelve feet on up, it is obvious that L2 has losses which should be kept to a minimum. Therefore, L2 should be made as low inductance as possible consistent with the length of antenna used and coupling necessary. In addition, large conductors and well-made connections will really pay off.

For radiators in the order of twelve feet long, use the constants specified, remembering that the smaller the wire used to wind L2, the less effective the antenna system will be. For appreciably longer radiators, reduce the inductance of L2 to as low a value as practical. If possible, wind L2 with copper tubing.

EFFECTIVENESS

It is difficult to state just how well an antenna works without taking a tremendous number of measurements. This has not been done, although a fair amount of experimental work has been completed.

For example, using a loop with twelve feet of wire, and the emergency rig on 80 metre c.w., W2FZW has been able to work stations in a radius of a couple of hundred miles quite satisfactorily.

One precaution is in order. There is a null perpendicular to the plane of the loop. That is, the loop radiates the least energy in the direction that you would see if you looked through the loop. This null is extremely sharp, and should not cause much trouble, since the rest of the pattern is quite broad.

"Simplicity In Four"

BY C. A. CULLINAN,* VK7XW

"Young fellows aren't like what they used to be in my time," said the Old Timer. "Why I was in a radio store the other day and there was a fellow asking the bloke behind the counter for a condenser, No. 6841, Catalogue B, so I pipes up, asks him what sort of thing that was, and he says he doesn't know, but that's what the Yank radio book said."

"Crickie, I suppose that's what gave the R.I. the grey hairs for I bet this fellow doesn't know one microfarad from another. He probably quoted catalogue numbers at him in the exam."

It is rather unfortunate that many magazine editors have adopted the policy of allowing their writers to describe the construction of transmitters and receivers by the name of a particular maker and his catalogue, and when it comes to getting a particular part, to find that it just can't be obtained.

This sort of thing is unfortunately more and more on the increase, and while the experienced Ham can soon devise something to take the place of "Whoo's's No. 5 left-handed resistor," the newcomer to the ranks of Amateur Radio may find himself stumped. It was therefore with these factors in mind that this little transmitter was designed. All parts are available in Australia and New Zealand from reputable stores and none of it is from disposable items that may be plentiful in Melbourne or Sydney and non-existent elsewhere.

To the Amateur newcomer who is looking for a simple easily constructed transmitter which can be put together with the assurance that it will go with a minimum of fuss and to the old timer after a nice low powered job, this little transmitter can be recommended.

DETAILS OF CIRCUIT

Now let us see what it will do. With only four inexpensive valves, it will operate on four bands with one crystal and deliver from 10 to 25 watts, depending on the power supply used.

Basically it comprises a type 6V6 valve operating as a straight crystal oscillator in the 80 metre band and its output is always on that band. This is a simple straightforward crystal oscillator that keys beautifully, has low crystal current and above all is free of the bugs that frequently infect the more complicated types of oscillators.

A type 807 is employed as a final amplifier, with plug-in coils for each band. On 80 metres it is operated as a straight amplifier. Provision is made for modulation and for this purpose the screen resistor is shunted by a condenser to permit simultaneous plate and screen modulation.

For 40 metre operation, the 807 valve is operated as a doubler, the oscillator

remaining on 80. To change from 80 to 40 it is only necessary to change the output coils and retune the final tank. The power output on 40 will not be as great as on 80, but the efficiency of the 807 is so high that the loss by using it as a doubler is not great enough to worry about.

In order to operate on 20 metres, a 6V6 is switched in between the oscillator and the final. This 6V6 is used as a quadrupler and on this band the 807 is operated as a straight amplifier.

For 10 metre work, the quadrupler is left in circuit and the 807 again becomes a doubler. It will be observed that the second 6V6 is triode connected and that the cathode circuit uses a 2.5 mhy. choke shunted by a small condenser. This combination makes the quadrupler slightly regenerative, but the stage is perfectly stable with no tendency towards self-oscillation as frequently occurs with complicated frequency multiplier stages. Thus we have a transmitter of three valves plus rectifier that gives operation on four bands with a minimum of coil changing, and other troubles, and is perfectly stable.

CONSTRUCTION

Now for some notes on construction. A chassis 11" x 7" x 3" will house the transmitter without the power supply. The three valve sockets can be placed in line and the crystal oscillator and final tank condensers mounted so that

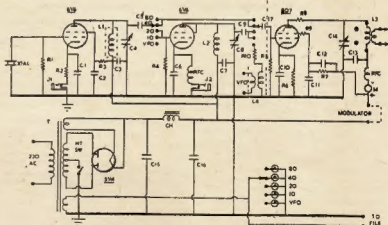
their shafts can be fitted with dials. The quadrupler tank condenser need not be extended to the front panel as it is set for the centre of the 20 metre band and left fixed in that position.

The switch is a standard receiver short wave switch. In our case each section has five contacts wired as shown. This is done so that a pilot light will show up which band is in operation. Strictly this is not necessary and a two pole switch can be used instead if the little bit of glamour of the pilot lights is not desired.

The oscillator plate coil is wound on a piece of 1" tubing and fitted inside a receiver coil can with spade lugs. The assembly is mounted on top of the chassis.

The 807 should be provided with a shield can around its lower portion; also a shield partition of aluminium was found necessary running from front to rear of the chassis on top and slightly higher than the 807 plate cap. This shield screens the whole of the final amplifier components above chassis from the remainder of the transmitter. This shield was found necessary in one model of this transmitter to get rid of a slight trace of instability in the final amplifier on 20 metres due to coupling back into the 6V6 quadrupler.

The quadrupler coil was wound on a piece of 3" broom handle. It was close wound and allowed to spring after winding. Then it was stretched to the length indicated. This coil was mounted underneath the chassis right between the plate lug on the quadrupler socket and an insulated terminal lug mounted on the back drop of the chassis. Naturally the coil is self supporting. Its tank



- C1, C2, C3, C7, C10, C11, C12—0.01 uF. mica condensers.
C4—100 pF. midge variable condenser.
C5, C9, C17—0.0002 uF. mica condenser.
C6—0.0001 uF. mica condenser.
C8—5 plate midge variable (25 pF.).
C13—0.005 uF. mica condenser.
C14—100 pF. variable transmitting type.
C15—8 uF. 600 volt electrolytic.
C16—16 uF. 600 volt electrolytic.
R1—25,000 ohm 1 w. carbon resistor.
R2, R6—250 ohm 3 w. w.w. resistors.
R3—50,000 ohm, 1 w. carbon resistor.
R4, R5—100,000 ohm, 1 w. carbon res.
R7—15,000 ohm, 3 w. w.w. resistor.
R8, R9—200 ohm, 1 w. carbon resistors.

- R10—200 ohm, 1 w. carbon resistor.
M—6-150 Ma. DC meter.
CH—30 hy. 100 Ma. 100 ohm choke.
T—Power transformer, 385/385 v. 100 Ma., 5v. 2a., 6.3v. 2a., with static shield.
RFC—2.5 millihenry r.f. choke.
Sundries: two octal sockets, one five-pin ceramic valve socket, one six-pin ceramic socket, four six-pin 1 1/2" coil formers, one short wave switch 3 bank 5 position, five pilot light assemblies, chassis to suit, two 6V6s, one 807, one 5U4 or 5Z3.

* 12 Montrose Place, Launceston, Tas.

condenser was mounted directly above on top of the chassis.

Coils for the final amplifier tank were wound on six-pin 14" diameter formers to the sizes specified. The socket for these coils was mounted off the chassis by means of a pair of small stand-off insulators.

It is important that the two resistors, R8 and R9, be attached as close as possible to the 807.

TUNING UP

One of the attractive things about this transmitter is the ease with which it can be tuned up. A milliammeter should be plugged into the keying jack, J1, and with the transmitter turned on, the oscillator condenser is turned until the plate current dips. This is the point of oscillation. If it has been necessary to use a different gauge of wire in winding the oscillator coil, or a different size shield can, then it may be necessary to alter the number of turns slightly on the oscillator coil to make the stage oscillate. If possible, use a crystal which will multiply into the centre of the 20 metre band.

With oscillation obtained, the tank condenser for the final amplifier should be rotated to obtain a dip on the final plate meter. Make certain that the switch is in the 80 metre position and that an 80 metre coil is in the socket. With 350 volts on the plate and no load on the final, this stage will dip to about 15 Ma. with the screen resistor specified. Next break the h.t. and insert the 40 metre coil. With h.t. re-applied, it will be found that on again rotating the final tank condenser another plate cur-

rent dip will take place. This will be about 20 Ma. The oscillator condenser should not have to be touched. It may happen that two dips will occur, one near full capacity and the other near minimum capacity. The latter should be checked with a wavemeter as it will probably be either the third or fourth harmonic of the oscillator frequency. Neither of these are required.

Next the 20 metre coil is put into place, again taking care to turn off the h.t. Apart from the danger of getting a shock, the practice of changing coils with the h.t. left on may damage the 807 for the screen is still connected to the h.t. supply.

The frequency selector switch is then turned to the 20 metre position and the final tank condenser rotated for the plate current dip. At this stage a wavemeter should be used to determine if the final amplifier is on 20 metres. If so the quadrupler tank condenser should now be adjusted, a milliammeter having been inserted in jack J2. Alternatively, the correct position can be found for the quadrupler tank condenser by turning it only and watching the final plate current meter for signs of a better dip. It is necessary in this stage to make certain that it is acting as a quadrupler, not a tripler. A wavemeter coupled loosely to L2 will soon determine this. If the stage is acting as a quadrupler, but will not tune properly it may be necessary to alter the tank coil slightly until the tank does tune. The values shown have proved successful in three transmitters, but stray capacities may alter things a little.

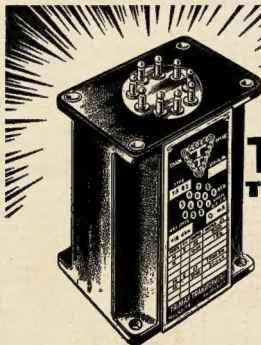
If the quadrupler is switched out of circuit by turning the switch to 80 metres it should be possible to obtain the 807 plate current dip on the fourth harmonic at the same position on the dial as 20 metre output is obtained when the quadrupler is switched in. In other words, the final amplifier tuning should be the same on 20 metres when the quadrupler is switched in and out. However, the amount of the final amplifier plate current dip will be greater when the quadrupler is in circuit, indicating greater efficiency in the 807. The dip should be about the same as was obtained when the transmitter was on 80 metres.

The next step is to replace the 20 metre coil with the one for 10 metres and with the quadrupler in circuit locate the 10 metre dip on the final plate current meter.

When all this has been done, it will be found that with the one crystal four bands can be covered with approximately the same output on each band.

No data has been given for the output link or coupling methods since this will depend to a great degree on the aerial system used and the antenna coupler employed if one is used. (A link coupled antenna tuner is very necessary when this rig is used on 40 metres, and is advisable for that matter on all bands, to prevent radiation of harmonics and sub-harmonics. Sub-harmonics are very prevalent when the final is used as a doubler, so play safe and link couple to an antenna tuner.—Tech. Ed.)

(Continued on Page 15)



TRIMAX TRANSFORMERS

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"Fireside Five"—With A Difference

BY STEVE GRIMSLEY,* VK3ASG

A 100 watt phone rig, a commercial communications receiver and a beam are just the things to have around for that serious work, but unfortunately take up far too much space when you want to operate from anywhere but the shack. That was the author's problem anyway, until he built up this little outfit—and all from parts on hand.

With only five tubes, plus rectifier, we have a receiver, modulator, crystal

transmitter, and phone monitor. It can be built up on one small chassis and goes "like a bomb" on either 230 a.c. or 6 volt d.c. You can use it for emergency work, for the holiday house, in the car, or just park it in the bureau drawer in the lounge or on the bedside table.

It's just the thing for those freezing nights in winter, or for a standby Tx when you want to work on the main rig and keep those skeds. Just put up a random length of wire in the ceiling and bring the end out near the fireplace, and you're all set to put on your slippers and keep the XYL company for a change!

Let's look at the circuit. Not exactly original perhaps, but simple, economical, and pruned of all but essentials. By all means build a conventional a.c. power supply if you wish. Supply voltage should be about 250 at about 80 Ma. Antenna switching arrangement is left to individual requirements. The author uses an old knife-switch type lightning arrester. The 6SH7 makes a beautiful regen. detector. It goes into oscillation smoothly, has a ton of punch, and has the added attraction of being readily available from disposals sources at a low price. A phone jack in the cathode of this tube (shorted in the "receive" position) is provided for monitoring phone quality. When transmitting, the short on the jack is removed, the h.t. removed from the tube, and half-wave rectification between the grid and cathode does the rest.

The audio section is quite normal. No gain control is provided for the modulator, merely load the final to about 30 Ma. (7½ watts) and don't scream into the mike and you will find full modulation will be automatic. A single "phone-c.w." switch is provided. This method

is not advised with a higher plate voltage than 250 as a burned out switch is bound to result, especially with plate and screen modulation and the normal panel toggle switch.

A single four-pole two-position switch is used for "Send/Receive." The two sets of contacts farthest apart should be used for the voice coil and 6J7 grid switching to obviate feedback. This switch is labelled S1 in the diagram.

The method of adjustment of the transmitter is obvious, and after checking the p.a. grid drive for oscillator out-

*46 Warrigal Rd., Surrey Hills, E.10, Vic.

PREDICTIONS

(Continued from previous page)

QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Perth-Mandla circuit would be useful—

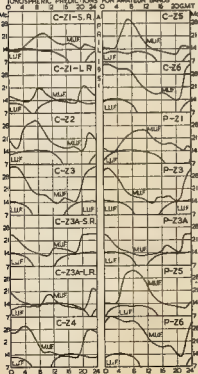
1. Were good conditions experienced on 7 Mc. for the period 1000 to 2200 hours G.M.T.?
2. Was the 14 Mc. band workable around 2100 hours G.M.T.?
3. Was the 28 Mc. band workable from mid-night to 1900 hours G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the month.

APRIL, 1951

It is hoped in the future to be able to continue to give the predictions a month in advance. Commencing this month, we also publish the chart for April, 1951.

IONOSPHERIC PREDICTIONS FOR AMATEUR BANDS



MAGAZINE

By the time this issue is distributed two members of the Magazine Committee will have been married, Ian Sewell, VK3IK, and Alan Head, VK3AKZ. The two remaining single members of the Committee are now going cross-eyed watching one another—who is next?

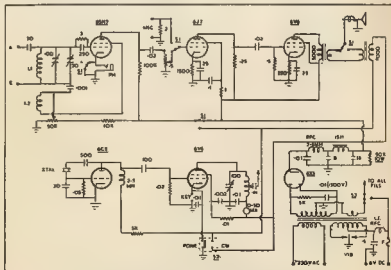
put, the 6C5 can be forgotten. Drive should be about 2 Ma. with about 180 to 200 volts to the 6C5.

To finish up, here are the coil details for 7 Mc.—

Receiver: Grid, 16 turns of 22 enamel $\frac{1}{8}$ " long, 1" diameter; Reaction 8 turns, 28 enamel, close wound, $\frac{1}{8}$ " from L1.

Tank: 16 turns, 18 tinned copper, on $\frac{1}{4}$ " former, spaced to length of $1\frac{1}{4}$ ".

One more thing, to achieve utmost selectivity from receiver, operate right at point of reaction and adjust gain control to suit.



Schematic diagram of "Fireside Five."

Note.—S1 shown in "Receive" position.

S2 "Phone"
S3 "A.C."

VK-ZL DX Contest Results, 1950

VK RESULTS

C.W. Section

Call	80	40	20	10	Total
VK2DG	—	493	2710	—	3203
VK2AHA	—	315	2402	80	2948
VK2ZC	—	370	1792	42	2604
VK2GW	—	178	1549	15	1842
VK2WD	—	—	804	—	804
VK2RA	—	456	—	—	456
VK2PV*	—	309	1056	—	1365
VK3DK	—	172	671	—	843
VK3XK	—	114	718	—	832
VK3PG	—	—	698	—	698
VK3PL	—	—	466	—	466
VK3RJ	—	—	340	—	340
VK3YF	—	—	180	—	180
VK3XB	—	—	186	—	186
VK3TX	—	—	134	—	134
VK3ET*	—	—	—	—	—
VK4 NL	—	370	1835	—	2205
VK5FH	—	—	1076	—	1076
VK5BO	—	—	688	—	688
VK5RX	—	—	303	—	303
VK5JE	—	—	228	—	228
VK5KO	30	196	—	—	228
VK8LJ	—	87	541	—	628
VK3XK/7	—	95	156	—	251
BERS195	—	677	2053	—	2730

* Denotes Check Log.

Certificates will be awarded to the highest scorer in each district as well as to the highest scorer on each band as follows—

80 metres	VK5KO	30 points
40 "	VK2DG	493
20 "	VK2DG	2710
10 "	VK2AHA	80
10 "	VK2AHA	149

Phone Section

Call	80	40	20	10	Total
VK2DG	—	1335	218	—	1553
VK2AKV	—	—	530	—	530
VK3HW	—	1995	135	—	2130
VK3LY	—	1988	—	—	1988
VK4KS	—	1751	—	—	1751
VK5LC	—	—	221	—	221
VK5RU	—	1251	912	—	2163
VK5KW	—	1093	828	—	1921

Certificates will be awarded to the highest scorer in each district as well as to the highest scorer on each band—
20 metres—VK3HW 1995 points
10 " VK5RU 912 "

ZL RESULTS

C.W. Section

Call	80	40	20	10	Total
ZL1MB	—	384	1590	75	2049
ZL1BY	63	447	1391	92	2013
ZL1AU	—	301	1172	29	1502
ZL1MQ	—	230	638	84	952
ZL1DV	—	—	750	—	750
ZL1QW	—	—	556	—	556
ZL1HD*	—	—	—	—	—
ZL1HY*	—	—	—	—	—
ZL2MM	—	499	—	—	499
ZL3OA	—	346	1656	—	2002
ZL3JA	—	224	774	15	1013
ZL3LL	—	627	—	—	627
ZL3CP	—	—	526	—	526
ZL4JA	—	—	1022	29	1101

* Denotes Check Log.

Certificates will be awarded to the highest scorer in each district as well as to the highest scorer on each band—

80 metres—ZL1BY	83 points
40 " ZL3LL	627
20 " ZL1MB	1590
10 " ZL1BY	92

Phone Section

Call	80	40	20	10	Total
ZL1MQ	—	—	553	195	748
ZL1HY*	—	—	—	—	—
ZL2GX	—	—	120	—	120
ZL3NQ	—	—	29	—	29
ZL4JA	—	—	457	84	541

* Denotes Check Log.

Certificates will be awarded to the highest scorer in each district as well as to the highest scorer on each band—
20 metres—ZL1MQ 553 points
10 " ZL1MQ 195 "

OVERSEAS RESULTS

C.W. Section

Call	Score	Call	Score
CESAG	622	OA4J	492
CN8EG	123	OE1CD	677
CT3AA	30	OH8NZ	395
CTIAL	44	OH8NU	139
DL1FF	1666	OK1VW	779
DL1KB	1115	OK1HI	880
DL1QT	901	PA0ZL	195
DL6BU	330	PY4IE	357
DL1EB	186	SM5PY	428
DL1FG	186	SM7QY	406
DL1YA/P	59	SM5CO	403
EA4CR	245	SM7MS	114
EA3CK	60	SM5LL	75
F8RO	327	SM5WL	89
F8TMM	187	SM6AQR	29
F8CT	130	SP1JF	389
F8ND	74	VS6BW	117
F8TZ	59	VU2BK	533
G2AJ	1219	W2WZ	1012
G8XN	835	W2EWW	207
G3COJ	755	W3HFK	821
G8DA	196	W3UV	116
G6AH	105	W3BLP	60
G3GPC	84	W3DLI	59
GMSST	15	W4LZF	774
GW3ZV	94	W4POF	337
GW3SP	320	W5QKT	86
GW8BW	318	W5AET	86
HA4SA	199	W6MZX	2250
HB8BN	329	W6UZX	2062
I1BCB	250	W6AM	855
I1EN	445	W7BTH	185
I1ER	44	W8ZBC	102
JA2FM	722	W9AEH	1284
KH6DQ	1251	W9YDP	15
KL7SF	45	YU1CBC	279
KP4CC	817	Z5SU	598
KZ5CW	98	Z4XCR	112
LA4K	45	Z5AX	100

Phone Section

Call	Score	Call	Score
CN8EG	74	PK1VW	249
DL1FF	73	PK4OO	313
EA4CK	170	PK4ZZ	73
EA3CK	57	SM5WL	29
F8RM	102	SM5APA	29
G6XN	451	VS1DZ	1041
GW3SP	140	W6UZX	806
JA5RC	64	W6AM	855
KH6ADY	45	Z2SSY	786
OK1HI	164	YN4CB	192
OK1VW	111	Z5JNS	501
OK2SO	98	Z4XCR	44
PA0BRG	15		

LISTENERS' SECTION

New Zealand—J. B. Holder, 648 points.
Australia—E. W. Trebilcock BERS195, 2750 points.
Switzerland—R. Dumas, HB9RSE, 422 points, E. Heritier, HB9RDX, 254 points.
Yugoslavia—Djuro Borosic, 128 points.
Germany—E. Kintuher, DEM1977, 189 points.
England—R. W. Thomas, BRS15822, 1138 points; W. L. Ely, BRS1535, 997 points; L. Shearlaw, BRS15846, 252 points.
Finland—Pentti Sare, 337 points.
Czechoslovakia—Joseph Foldyna, OK2-6024, 388 points.

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N.S.W. Division Jubilee Year Annual Dinner, Hamfest and Field Day

BY BILL MOORE, VK2HZ, AND DAVE EVANS, VK2AYE

The Annual Dinner, Hamfest and Field Day, which marked the celebration of the Jubilee Year and the fortieth anniversary of the Wireless Institute of Australia, New South Wales Division, will be long remembered as the most outstanding function of the Division for many years. Preparation of details was undertaken by the Council, ably assisted by a group of Past-Presidents who willingly submitted to co-option on the Committee, and in short order a programme was formulated and duties and details worked out and allocated.

TELEVISION DEMONSTRATION

The first item on the programme was timed for 8 p.m. on Friday, 26th January, with a television demonstration and lecture at the A.W.A. Works, Ashfield. Over 250 members and friends attended and many received an excellent first viewing of this new branch of radio science. The meeting was opened by Mr. Parkinson, A.W.A. Works Manager, who expressed his pleasure at having the members of the Institute as the guests of the Company and then turned over the conduct of the meeting to President Jim Corbin, 2YC. Jim proceeded to welcome members' guests and outlined some points of our history. Our photogenic President had the doubtful pleasure of addressing a very sparse audience for the majority of the guests were observing the proceedings in the television receivers which lined one side of the large cafeteria and which provided excellent definition and was ably supported by a first-class audio transmission. On the termination of his remarks, Jim turned the microphone over to Mr. Fleming, A.W.A. Staff Welfare Officer, who introduced our lecturer, Mr. W. Honner, of A.W.A. Research Laboratories.

Mr. Honner spoke at length on the general principles of television and was able to strike a style of delivery which made his address as interesting to our non-technical guests as it was to members. Of particular interest was the recounting of his experiences in television transmissions in various countries abroad: England, France and U.S.A. all came under discussion and a brief description of the types of programmes transmitted in each country gave members an opportunity to appreciate the fact why the 625 line was being adopted here. Television, Mr. Honner pointed out, would never completely succeed in displacing conventional radio in the affections of the people; it was a totally different type of entertainment and, due to the extremely high cost of programme production, it would never occupy lengthy transmission periods. Another difficulty was the fact that a television programme had to be rehearsed for six weeks before presentation, further, acts could be used and once a programme was produced, it was the final show and no recording could be made for future use. Obviously, therefore, television called for a set of exacting standards from both actors and personnel and it

would be a long time before the OM's dinner and the housework suffered through the addition of the XYLS to the magic screen. The latter point was dealt with by Mr. Honner in humorous vein and indicated that the future may see a brood of television widowers replacing the many radio widows.

At the conclusion of Mr. Honner's lecture a demonstration of the various lenses was made, showing the systems used for "close-ups." Guests were invited to walk before the television camera and to observe themselves in a screen which had been placed adjacent to the stage. Practically all present availed themselves of the invitation—with not a few shocks. President Jim Corbin then proposed a vote of thanks to the A.W.A., coupling with it the names of Messrs. Horner (Asst. Gen. Manager), Parkinson, Honner and Fleming and the cafeteria staff who had sacrificed part of their holiday period to enable the Company to entertain us. The vote of thanks was ably seconded by ZEA and was carried by acclamation.

Guests were then invited to partake of an excellent buffet supper, the standard of which was fully in keeping with that of the entertainment and to which all did justice. The meeting concluded at 10.45 p.m.

The thanks of the Division are due to A.W.A. for their whole-hearted co-operation in providing a diversion of such outstanding quality, and, in particular, desires to thank those ladies and gentlemen who curtailed their holidays so that the Company could conduct the function.

GEAR ON VIEW

The second feature of the Hamfest was a gathering of the clan at Federation House at 2 p.m. on Saturday at which over eighty members attended for a demonstration of gear and a general "rag-chew." The meeting was opened by the President and, as the first item on the programme, 2IQ set himself up as a "sitting shot" for unorthodox questions regarding any angle of Amateur practise. Angus took all the honours as nobody succeeded in upsetting his equilibrium. He was followed by Cec Cronin who gave a remarkable demonstration on 576 Mc. and the rig, operated by 2IQ, maintained contact with 2KF who was moving around the city in a car, and with ZANF who operated in a building in the city. The 576 Mc. gear, transmitter and receiver, was housed in the base of an ordinary telephone and will indicate the facility and ingenuity of Cec when confronted with problems of design and construction.

2ADT then demonstrated a turret switched receiver and gave lengthy descriptions to all interested. The receiver embraced all the most desirable attributes of communication receivers and was a remarkable piece of home-built equipment. Switching is accomplished from 144 Mc. through to 3.5 Mc. and the construction must have provided Jack with some solid headaches. [Methods this Rx would be the makings of an excellent article for "A.R."—Ed.]

2ARH was next on the rostrum when

he displayed and described a Grid Dip Oscillator and Antenna Scope. Ray's ability to hold the interest is well known and his remarks were well received. Final item was the serving of afternoon tea by members of the Divisional Council and their Tea Director, Joyce Jira, 2AMJ. This tea, being arranged by males, showed their lack of training since we had no teaspoons or tea towels, however, four spoons came to light from some angle and eventually all hands were sweetened up. Members then adjourned for a break before the start of the Annual Dinner.

ANNUAL DINNER

Members congregated in the Sky Ballroom of Federation House from 7 p.m. for sherry and savouries and a get-together while the President and members of Council welcomed our official guests who included:—

Hon. T. L. Anthony, Postmaster General

Mr. J. J. Malone, Chairman, Overseas Telecommunication Commission (Australia).

Professor Bailey, Professor of Experimental Physics, University of Sydney.

Mr. T. Armstrong, Superintendent (Wireless) P.M.G., N.S.W.

Mr. T. Court, President, Institute of Radio Engineers.

Dr. F. Adcock, Inventor of the Adcock Direction-Finding System.

At 8 p.m. 150 members and guests took their seats for dinner. First toast of the evening was "The King" and was proposed by the President, Jim Corbin. The toast of "The Wireless Institute of Australia" was proposed by Mr. J. J. Malone, for many years Chief Radio Inspector and possessing a full and complete knowledge of Amateur Radio. Mr. Malone prefaced his speech by congratulating the Institute on its fortieth anniversary and reminding members that it was a matter for pride that they belonged to the oldest radio organisation in the world. He dealt with the pioneering of short waves by Amateurs in the early days of the science, the national value of the Radio Amateur to the Armed Forces in time of war, their support of the R.A.A.F. Wireless Reserve and their unsolicited services to the community during any emergency. Mr. Malone concluded his speech with some humorous references to his dealings with Amateur Radio; one worth recounting was anent the XYL who wrote to him asking that the OM's license be revoked because he was neglecting his home obligations.

Jim Corbin, President, replied to Mr. Malone and said that Amateurs were still pioneering new bands and that the old enthusiasm was still prevalent. Already the Tasman had been bridged on 144 Mc. and Amateurs were constantly endeavouring to reach out further. He reiterated the constant desire of the Radio Amateur to contribute to the well-being of the community and mentioned that it was during the first forty-eight hours of any emergency that the assistance of the Amateur was most

necessary. In conclusion, Jim assured Mr. Malone that when a national call was made, the Radio Amateur would not be found wanting.

The toast of the "Postmaster General's Department" was ably rendered by 2JU, Divisional Councillor and Federal Councillor for this Division, who referred to the honour conferred on the Division by the presence of the Hon. T. L. Anthony, Postmaster General, at our Annual Dinner and ventured the hope that, now he had met us, he would be with us again in the future. John mentioned the cordial relations which had at all times been characteristic in the dealings of the Department with the Institute and recorded the appreciation of the Institute for the able and sympathetic attitude of officers of the Department when confronted with problems affecting the welfare of Amateur Radio.

In reply, the Hon. T. L. Anthony disconcerted members by stating that he was no stranger to radio. He was an operator in the 1914-18 war and mentioned events which transpired when on field operations in the desert with camel transportation. Claiming to know little of current practise, Mr. Anthony had little trouble in gaining the sympathy of the old-timers when he described the vicissitudes of tuning the old rotary spark gaps and the vicious "bites" they were liable to hand out. He referred to the pleasure he experienced that evening in making a personal contact with Radio Amateurs and remarked that he was pleased to see quite a large number of "mature" Amateurs in the gathering. He appealed to all members of the Institute to encourage young men to join our ranks and to adopt radio and television as a career as well as a technical hobby. Television had many applications in the defence field and it was the desire of the authorities that Australia should not be wanting in technicians in this new field of activity. At all times his Department would stand by with assistance and guidance and the Institute could rest assured of sympathetic consideration of any matter submitted.

Mr. Anthony conveyed the thanks of the Government and the Department to the Institute and its members for their outstandingly unselfish work during the Kempsey floods and other emergency operations.

As a diversion between speeches, members were entertained by Will Andrade, the well-known magician, and his equally well-known (though in other channels) assistant, 2OF. Jack submitted willingly to all illusions including that of losing his right hand, but was somewhat upset when, in the course of a trick wherein a paper cover was placed around his tie, the magician lost some of his instructions regarding the operation of the trick and, instead of cutting through the paper, leaving the tie intact, he scissored his way through the tie and left Jack only sufficient "tail" to make up a neat little bow-tie. Understood that Jack is now considering a "Budgie" hair-cut to go with the new bow-tie.

The function concluded shortly after 10 p.m. when a general "ear-bash" automatically came into operation. It was generally agreed that the dinner was a huge success and it would appear that a larger venue may be required next year.

FIELD DAY

The final effort, winding up the Ham-fest, was the Field Day at Lane Cove National Park where about one hundred members and their families attended for an alfresco picnic outing while 2WI went "portable" in the National Field Day Contest. It was the intention of Council that the usual Sunday morning broadcast be made from the park, but technical faults developed in the rig and so were not ironed out until 11.30 a.m., so the idea was discarded. In the Field Day operation 2WI succeeded in working all States and New Zealand. Quite a number of the gang arrived at the picnic ground with transmitters and, after getting the hang of things, left for pastures new where they had a reasonable chance of operating without interference from adjacent stations. Judg-

ing from the number of stations operating portable, it would seem that the National Field Day is regaining its popularity in this State and it is hoped that next year will see a still greater list of entries.

As a social gathering the Field Day was a success and rumour has it that our worthy President is already planning for a bigger and better show next year—with sports for the ladies and children. Towards sunset parties drifted away and when the writer left, the sole survivor was 2XU who was only then packing up his transmitter.

The Council desires to place on record its appreciation of the efforts of all members who co-operated so completely by their attendance at all functions and assured the success of the Hamfest.

The First Shipment is Here for Immediate Delivery!

Eddystone "740" Communication Receiver

- Operates from 110 and 220/250 volts, 40/60 cycles AC mains with provision for 6v. external vibrator power supply for mobile/portable use.
- Range—205 metres to 30.6 Mc. in four bands. The first three ranges are directly calibrated in frequency and the fourth in wavelength, to an accuracy better than 0.5%. Range 4 includes the International Distress Frequency.
- Receiver—an eight valve superheterodyne with 450 Kc. permeability tuned I.F. channel:—

V1—EAF42—RF Amplifier.
V2—ECH42—Frequency Changer.
V3—EAF42—IF Amplifier and AGC.
V4—EAF42—AF Amplifier and Detector.
V5—EL42—Output.
V6—EAF42—Beat Frequency Oscillator.
V7—EB41—Noise Limiter and "S" Meter Limiter.
V8—EZ40—Full Wave Rectifier.
(All Valves have B8A Bases.)

- Input Impedance—400 ohms.
- Output Impedance—2.5 ohms.
- Provision for External "S" Meter.
- Sensitivity—Better than 10 microvolts for a 15 db signal-to-noise ratio.
- Selectivity—30 db down 10 Kc. off resonance.
- Image Ratio—Better than 15 db at 30 Mc. and correspondingly higher at lower frequencies.

Price (Less Speaker) £73/15/-

EDDYSTONE MODEL "670" — MODEL "750" — MODEL "680"
AVAILABLE EX STOCK.

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FEDERAL, CSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK5WG); Federal Secretary: G. M. HULL (VK5ZS); Box 351W, G.P.O., Melbourne.

NEW SOUTH WALES

President: J. Corbin, VK3YC.
Secretary: David H. Duff (VK3EO), Box 1734 G.P.O., Sydney.

Meeting Night: Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editors: A. C. Pearce, VK3AHB, 131A Walsall Rd., Leichhardt, N.S.W.
Zona Correspondents: North Coast and Tablelands: J. M. Reilacke, VK3KO, Raleigh, Newcastle; H. Whyte, VK3ARA, Vase St., Bingham Gardens, Newcastle, Cessnock & Lakes; H. Hawkins, VK3VL, 21 Comfort Ave., Cessnock; Western: W. H. Stitt, VK3WV, Cumbriana, Forbes, 3828 Coast and Southern: R. H. Hayner, VK3SD, 42 Pettit St., Yass; Western Suburbs: A. C. Pearce, VK3AHB, 131A Walsall Rd., Leichhardt, Eastern Suburbs: D. B. Knock, VK3NO, 43 Yanko Ave., Waverley, North Sydney: L. D. Cuffe, VK3AM, 715 Military Rd., Morningside; St. George: J. A. Ackermann, VK3ALG, 32 Park Rd., Carlton; South Sydney: V. M. Wilson, VK3WV, Cr. Wilson St. and Nerine Pde., Maroubra.

VICTORIA

President: G. S. C. Semment, VK3OS.
Secretary: C. Dyer, VK3DZ, 18 Collingwood Ave., Brighton (IXA 8328).
Administrative Secretary: Mrs. S. May, Law Court Chambers, 151 Queen St., Melbourne.
Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.
Zona Correspondents: Western: C. C. Waring, VK3YJ, 12 Sierra St., Geelong; South Western: K. O'Reke, VK3AKR, Killgrew, Westmore; North Eastern: T. K. Tennant, 15 Harold St., Shepparton; Far North: J. A. Smith, VK3QZ, 151 Lemon Ave., Mildura; Eastern: N. O. Kallas, VK3AHK, Timbarrue; North Western: C. Case, VK3ACE, Cumnings Ave., Birchlip.

FEDERAL

21st ANNUAL FEDERAL CONVENTION

As members are no doubt aware, the 21st Annual Federal Convention is held this month in the Headquarters Division's Rooms in Queen Street, Melbourne, and with a fairly large and sympathetic attendance, it is hoped that the discussions and determinations arising from the Convention will materially assist each and every member of the Institute to gain more pleasure from his hobby.

Your delegate will come to the Convention previously armed with the opinions of your Division's Council and his ability to convey those opinions and discuss them rationally is the reason he has been appointed to represent you.

The determination arising from the Federal Convention can have far-reaching effects on each and every member regarding the operation of his station. It is therefore of paramount importance that you take an interest in the proceedings of the Convention the minutes of which, and the subsequent action taken on them by Federal Executive) are published in the magazine during the year following the Convention; it is not sufficient that your delegate should travel many miles and sacrifice his Easter holidays to fight for your rights without your interest and support.

Any member is cordially invited to attend the Convention and it is hoped that some of you will turn up to listen to the proceedings with a view to not only having a clearer conception of how you obtain some of the privileges you have, but also in order that you can more fully appreciate the workings of the Institute as a whole.

It goes without saying, of course, that you are not expected to travel hundreds of miles to attend the Federal Convention, and that some members from other States are in Melbourne at the time of the Convention and it is from these members we hope to hear of this year. There is no excuse for some Victorian members not to attend!

But it is impossible for you to attend you can still assist the Institute and your fellow Amateur by interesting yourself in the proceedings of the Convention when they are published, discuss them intelligently with your Amateur friends, and if you consider that the determinations of your Council could have been improved, add a note with a view to bringing the matter up for the following Con-

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK3WI: Sundays, 1100 hours EST, 7196 Kc. and 3000 hours EST 50 and 144 Mc. No frequency checks available from VK3WI Intra-State working frequency, 7195 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3596 and 7196 Kc. and re-broadcast on 50 and 144 Mc. bands. Intra-State working frequency 7195 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0800 hours EST, simultaneously on 3730 Kc., 7196 Kc., 14942 Kc., 33.4 Mc. and 144.138 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7005 Kc. channel is used from 1000 to 1050 hours each Sunday as VK4 query service to VK4WI.

VK5WI: Sundays, 1000 hours EST, on 7196 Kc. Frequency checks are given by VK5DW by arrangements only on the 7 and 14 Mc. bands.

VK6WI: Sundays, 0800 hours WAST, on 7196 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7196 Kc. No frequency checks are available.

SILENT KEY

VK5XO

It is with deep regret that we record the passing of Charlie Parlett, VK5XO, on the evening of 26th January, 1951.

vention the next year, or write to your Divisional Councillor and give him your comments, then if he considers that your comments are constructive he can submit them to your Council for action. Any new ideas, or constructive criticisms, can likewise be brought to the notice of your Divisional Councillor at any time during the year—that is what he is there for.

It appears that many members think that their own State Convention is the only means by which agenda items can be forwarded for action by the Federal Convention. This is wrong! You can make suggestions through your Divisional Councillor at any time during the year. You can air your complaints at any time through the same channel. If in the opinion of your Councillor your suggestion, complaint or criticism is considered to be a Federal matter, he can forward same to Federal Executive for action. It is only with the smooth working of this system that you can enjoy running the Institute and your grand hobby can give you.

Federal Executive wish to thank all active officers and members of all Divisions for their support and co-operation over the past year, and trust that the interest of all members for the ensuing year will be such that the expenditure of Institute funds to hold the 1951 Convention will not have been in vain.

W.I.A. ACTIVITIES CALENDAR

March 3-4: B.E.R.U. Contest—C.W.

Mar. 9-11: 17th A.R.R.L. Contest—C.W.

Mar. 16-18: 17th A.R.R.L. Contest—Phone.

QUEENSLAND

President: J. H. Farrell, VK4WJ.
Secretary: J. F. Pickles, VK4FP, Box 653J, G.P.O., Brisbane.

Meeting Night: Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.

Divisional Sub-Editors: Clive J. Cooke, VK4CC, Kurran Street, Chermside, Brisbane.

SOUTH AUSTRALIA

President: E. A. Barber, VK3MD.
Secretary: G. M. Bowen, VK3XU, Box 1234K, G.P.O., Adelaide.

Meeting Night: Second Tuesday of each month at 17 Wymouth St., Adelaide.

Divisional Sub-Editor: W. W. Parsons, VK3PS, 483 Esplanade, Henley Beach.

WESTERN AUSTRALIA

President: R. W. S. Hugo, VK3KW.
Secretary: W. E. Coxon, VK3AG, 1 Howard St., Perth.
Meeting Place: Padbury House, Cr. St. George's Ter. and King St., Perth.
Meeting Night: Third Tuesday of each month.
Divisional Sub-Editor: Alec A. Smith, VK3AS, 75 Weston St., Carlisle, Western Australia.

TASMANIA

President: J. Brown, VK7BJ.
Secretary: R. D. O'May, VK7OM, Box 371B, G.P.O., Hobart.
Meeting Night: First Wednesday of each month at the Photographic Society's Rooms, 183 Liverpool St., Hobart.
Divisional Sub-Editor: S. Excell, VK7SJ, 77 Mollie St., Hobart, Tasmania.
North Zone Correspondent: R. H. Kilby, VK7KR, 5 Galvin St., Launceston.

1951 Federal Convention Time Table
Friday, 23rd March—2.30 to 9 p.m. and 7.30 to 10.30 p.m.
Saturday, 24th March—8 a.m. to 8 p.m.
Sunday, 25th March—8 a.m. to 9 a.m. and 8.30 to 10.30 p.m. (The evening session will be subject to general business requirements.)
Monday, 26th March—8 a.m. to 1 p.m.

SUCCESSFUL A.O.C.F. CANDIDATES

The following is a list of candidates who were successful at the examination for the Amateur Operator's Certificate of Proficiency held on Tuesday, 9th January, 1951:

New South Wales
Ash, B. E., P.O. Box 81, Nyngan.
Clark, A. E., 205 Great North Road, Abbotsford.
Howie, J. A., 21 Gould Street, North Bondi.
Morgan, A. R., 125 Victoria Street, Ashfield.
Smith, A. J., 10 Blenheim Street, Enfield.
Watkins, N. R., c/o P.O. Neverlie.

Victoria
Burrows, C. C., Deschamps Avenue, Lilydale.
Chapman, G. N., 147 Helen Street, Morwell.
Diella-Pietras, J., 13 Rose Street, Bentleigh.

Queensland
Hope, J. T., Royal Pde., St. John's Wood, Ashford.
Lundsgaard, K. J. H., Box 7 P.O., Nobby.
Lewis, J. R., Orchard St., Enmore, Brisbane.

South Australia
Lally, T. J., P.O. Box 98, Clare.
Palmer, R. E., 4 Bernard St., Lower Mitcham.
Vivian, H. E., 69 Livingstone Avenue, Prospect.
Westley, J. F. B., 23 Glenunga Ave., Glenunga.
Whitby, R. K., Naval Department, Darwin, N.T.

Western Australia
Field, B. R. E., 11 Alexandra St., South Perth.
Turner, F. H., 74 Chelmsford Road, Mt. Lawley.

Tasmania
Armstrong, C. H. A., South Arm, Tasmania.

ADDITIONS, ALTERATIONS AND DELETIONS TO AMATEUR CALL SIGNS

December, 1950, and January, 1951

VK5—ADDITIONS

New South Wales
2FD—B. W. Thomas, 21 Haxallish Ave., Wahroonga.
2IS—A. A. Shearman, 132 Douglas St., Blacktown.
(Continued on Page 15, Column 2)

"SIMPLICITY IN FOUR"

(Continued from Page 7)

It will be noticed that one position of the frequency switch is marked v.f.o. This position permits the transmitter to be v.f.o. operated on 40 with the 897 as a straight amplifier with a 40 metre Command transmitter as v.f.o.

The input circuit for the v.f.o. connection is not tuned and the resistor in the "high" side of the secondary is used to stop a case of instability in the 897 when the v.f.o. connections were switched in.

In one of these transmitters a second switch was used at the input to the first switch bank so that the v.f.o. drove the quadrupler as a doubler on 20 and a quadrupler on 10 metres

Of course, an 80 metre v.f.o. can be connected in place of the crystal or a switch used to change from one to the other. Do not tune the secondary of the v.f.o. input transformer to avoid oscillation in the first 6V8.

POWER SUPPLY

The power supply shown is constructed from receiver type components which are not in short supply. If a higher voltage supply is available, up to say 500 volts, then greater power can be obtained, but it is advisable not to increase the crystal and quadrupler voltage above 350.

If modulation is desired, the secondary of the modulation transformer can be connected as shown. Do not connect it in the common B plus lead, and use a separate power supply for the modulator.

Using a simple aerial and the 350 volt power supply one of these transmitters has worked all States on 40 metre phone with ease.

COIL DATA

L1—45 turns of No. 26 B. & S. enamelled wire close wound on 1" former and mounted inside aluminium coil can 3" high by 1 1/2" diameter.

L2—13 turns of No. 16 B. & S. enamelled wire 1" diameter and spaced to occupy 2" in length. Self supporting, see text.

L3—3.5 Mc.: 26 turns of No. 20 B. & S. enamelled wire wound on 1 1/2" six pin former to occupy 2" of winding space.

7 Mc.: 14 turns of No. 20 B. & S. enamelled wire wound on 1 1/2" six pin coil former, spaced to occupy 2".

14 Mc.: 9 turns of No. 16 B. & S. enamelled wire, wound on 1 1/2" six pin coil former, spaced to occupy 1 1/2".

28 Mc.: 4 1/2 turns of No. 16 B. & S. enamelled wire, wound on 1 1/2" coil former, spaced to occupy 1 1/2". Coupling link to be determined by trial. See text.

L4—Primary: 6 turns of No. 20 B. & S. enamelled wire, close wound at earthed end of secondary winding. Secondary: 30 turns of No. 26 B. & S. enamelled wire, close wound, coil former 1" diameter. L4 is placed inside an aluminium coil can, 3" high by 1 1/2" diameter.

FEDERAL

(Continued from Page 14)

2MR—J. E. Stewart, Villa Rd., Waratah, Newcastle.

2PG—J. H. Gore, 13 Pearl St., Newtown.

2PJ—W. D. Taylor, 14 Ferrier St., Blackdale.

2SAS—W. J. Storer, 17 Harrington St., Marrickville.

2ABR—W. W. Rushby, 59 Salisbury Rd., Guildford.

2ACV—A. G. Mukachy, 30 Ballarat Point Rd., Birchgrove.

2ACZ—C. E. Edwards, "Sandyways," Myra Rd., Newport Beach.

2AHH—N. A. Hanson, Ryan Av., W. Kempsey.

2AKZ—C. D. Bennett, 29 Worrigee St., Nowra.

2APA—A. F. Ashby, 131 Croydon St., Lokenham.

2APH—E. A. Hayward, 33 Victoria St., Epping.

2AQJ—J. H. L. Field, Fallowfield, Deniliquin.

2AQJ—J. H. L. Field, Fallowfield, Deniliquin.

2ATA—P. A. Tavesare, 14 Glebe St., Edgecliff.

2AXS—R. H. Smith, Cr. Gipp & Coors St., Dubbo.

2AXY—R. J. Ansper, 126 Charles St., Ryde.

Victoria

3YQ—K. V. Rogel, 43 Willow Gr., North Kew.

3AFH—H. F. Huon, 55A Matland St., Glen Iris.

3AFH—H. F. Huon, "The Shack," Seventh St., Merburn.

3AGW—A. O. Wilkey, 97 Wattletree Rd., Malvern.

3AHC—R. I. McNabb, Newstead.

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3AHC—R. I. McNabb, Newstead.

5WD—Cancelled.

South Australia

Western Australia
6WJ—Cancelled, now operating under VK3AGW.

Tasmania

TNL—Cancelled, now operating under VK3AQJ.

Territories

1PG—Cancelled.

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Heidi, FBWJ, mentions via VK3YL that he has sent QSLs to over 50 VK3 stations but up to date has not received one card in reply. Station owing Heidi a card is requested to expedite same. Thanks for the greetings. Austine. These are heartily reciprocated.

Heard on 14 Mc. c.w between 1400-1500 GMT 2nd Jan., LK1JW, 151CQV 4X4CJ 4P48AF, 5V3AG, VASBP. Last named after one QSO with 4X4CJ closed down. Scores of other Europeans were audible at good strengths at same time.

4X4KE, Box 4099, Tel Aviv, Israel. PK3AA, Radio Station, Balikpapan, Borneo, Indonesia.

Heard island replacements who left by the "Labuan" recently are: VK1NL, Nila Laid; VK1RJ, Kevin Jamieson; and VK1DC, Dave Chasels. All of these Hans have had extensive tuition at the hands of Leon Paul, VK3XO and will not answer stations on their own frequency. They propose to use QLM, QHM, etc., extensively in an endeavour to impart long needed discipline to the selfish and ruthless stations. Stations bursting in or calling before a contact is completed will be blacklisted and not answered on that or any succeeding day. Cards for the above stations may be sent to Leon, at 348 Rethelms St., Fairfield, Vic., or to this Bureau. Complete logs will be preserved and all QSLs answered on return to Australia in 1952.

While on the subject of QSLs from Antarctica, if VK1VU has lost his logs or does not intend to QSL, it would be of great advantage if a public statement to this effect was made as overseas and local stations continue to send repeat cards to this Bureau. Letters from this Bureau to the published address in VK of VK1VU have not merited the courtesy of a reply nor have the letters been returned. This seems to indicate that they are being delivered. Some announcement as outlined above would save a lot of your QSL Managers' time and allow a great deal of heartburning amongst overseas stations who continue to clamour for a QSL. The good name of VK Hans is suffering.

The Radio Club of Chile again brings under notice its W.A.C.E. Award. The award is made to any foreign Amateur who has worked one

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station in each of the seven radio districts of Chile. Phone or c.w. contacts made on any Amateur band after 18th November, 1945, will count. The seven cards should be sent to the Radio Club de Chile, Box 761, Santiago, and will be returned by registered mail together with the certificate. No return postage need be enclosed.

It is stated that DLAFS will shortly be heard from Andorra (FPK) and will be legit.

Don Dickinson, JAIDD, writes: "As I am going off the air this week after two years in Japan, I would like to have you pass on to the VK fellows my appreciation for all the pleasant contacts they have given me. Practically no day has passed without a contact (83 stations worked). I have gone through my card file and made up these duplicates in hopes that I can receive confirmation from the stations."

No response was received to the par seeking the VK QTH of ex-VZBA, Ron Garrett, who it is rumored is now in VK. Can anyone supply?

NEW SOUTH WALES

The usual monthly meeting of the Division was held at Science House on Friday, 22nd December, 1950, being opened at 7.45 p.m. The month's accumulation of correspondence revealed the usual attention and a number of new members admitted to the membership. Visitors present were given a hearty welcome to the meeting by the President, Mr. J. Corbin. A discussion on the various agenda items for the 1951 Federal Convention was then proceeded with and finalised to allow the showing of a number of amusing films.

The sympathy of the Division was extended to relatives and friends of the late Bill Cottrell, ex-VKXEN. Bill was extremely well known, being one of the real pioneers in the art. He will be greatly missed by the members and all who knew him.

WESTERN AUSTRALIA

200 is still going strong on 30; has pruned his driven beam to the last degree and is working stiff the local DX men can't raise 2AVT, nothing heard of Vince lately; how is the ASV on 14 Mc? 2AMJ has been on 144, 40 and 20, but not on 10 metre as yet; has been working to improve the 20 metre beam of late. 2XKI trying c.w. lately with excellent results. 2ADL must be sticking up the napskin instead of DX,

nothing heard since the arrival of a new junior op. 2BJ and 2AJE send word in cabods regarding the virtues of Port Hacking recently. 2MJ and 2AJE just can't forget "Bucking Billy," the old steam train out that way. Who could 2ATL working a few good ones on 20 metre phone. 2WB is heard infrequently but Arch uses his beam to good effect.

EASTERN SUBURBS

A highlight of the doings around this region has been the receipt of the promised 2AYE QSL card, in which design Dave has done a good job. The theme is fully Australian with aboriginal smoke signals drifting in the hazy air with the letters "CQ" in formation. Wonder if they sign "three by three" Dave! 2CF recently visited Woy Woy to show off a very compact 144 Mc rig installed in the car, in a demonstration to interested parties, he called CQ and immediately found a taker—just across the road! 2CF has now completed the conversion of an ASV unit for use on 144 Mc; has also acquired a new commercial RX. 2ARQ doesn't seem to be heard at all these days, but I hear that Ted has been in poor health for some time. The gang in the area send wishes for a speedy recovery OM. 2BC heard pounding the brass with a consistent 350 signal. 2AZE seems to be always up to his eyes in some job or other and this time it has been the programme for this year's North Coast Zonal Convention scheduled again for Urunga, 2.b. Job OM.

2AZT has hopes of starting a 144 Mc. net in the Bondi-Waverley area (shades of pre-war 2 metres!). Stations known to be interested in 144 Mc are VKs 2AX, 2AYE, 2TN, and 2FJ. There are doubtless others who would like to be in, but who need time to get gear built. The thought prompts this scribe to remark that it might be a good idea to foster v.h.f. nets as suggested in the editorial in "QST" for December. 2AIG just completed a new modulator and after 15 years or so on the key, has turned to phone operation for a holiday and relaxation; the quality is very good Ray. 2ZQ virtually rocked the gang by appearing on 40 metre phone, ostensibly to hold converse with cobsers in VK3. Back on 20 metre phone with good quality and sometimes a few unwanted little perisies to the low freq. side is 2EP. Puts in a lot of time checking with 2AZH. This area has an Amateur of note who has not been heard from as yet, but surely not for long? He is Dave Medley, now VK3AWF, Bondi, and

latterly 5AR (Darwin) and 2MJ (Melbourne). For the benefit of those who don't know their v.h.f. history it was 2MJ who made the first Interstate QSO on 6 metres with 2NO four years ago.

Visited 2YC, W.I.A. N.S.W. President, and found Jim literally surrounded by a mass of incoming QSL cards replete with pretty pictures; somewhat like the DX cards we used to receive prior to the end of 1939—a kind of lifting of the curtain! The other evening a protracted discussion developed on 40 metre phone in which your reporter found himself in the midst willingly. It was all over a simple question, but albeit one that nobody could give an immediate answer to at the moment. The question was, just which comprised the correct connections for the EF84 valve, otherwise the RL7—a somewhat better performer than the EF80, if that be possible (See "A.R." Nov., 1946, p.8-Ed.). Seems that somebody had been adding a 6 metre converter employing an EF84 with anode and screen connections reversed, and getting results.

That ultimatum in the last issue of some notes still stands—if you kids won't pass on the "gen" about things then the time will come when the lone pen must hang. Latest activity at 2NO is the testing of a new experimental Amateur band RX, which is developing to be something outstanding. With two stages of 110 Kc. i.f. in the final channel the bandpass for phone is just about right, with selectivity such that the dial shows gaps between signals that overlap considerably in the usual channel 450 Kc. i.f. RX. The crystal controlled converter input provides a revelation in stability and makes life a real joy for the c.w. DX addict. The tuner is a converted Command type RX with adapted dial giving comfortably wide bandspread but with speedy coverage. Final set-up will cover all the Amateur DX bands.

NORTH COAST AND TABLELANDS

All roads lead to the Urunga Convention at Easter, March 24, 25 and 26. The Convention promises to be the best yet held in Australia. If you have not as yet received a programme and hetrodyne and would like one, contact 2XCO. Cine-Sound cameramen will be here to make a news reel. If you have portable gear bring it along and make the newswear a success. An additional trophy in the form of a cup has been donated by United Radio Distributors, for the Urunga Scramble Contest.



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SOUTH WESTERN ZONE

Very little news of some members this month for two reasons—your usual scribble, 3AKR, is away in camp examining his head full of Army radio procedure, and the zone hook-up on 80 metres was a washout as far as this end was concerned. However, Kevin promised you all some more news of the Mt. Bunagar trip this month so here goes.

The results will be well known by now, and we congratulate 3RIT and 3CR on their success. The excitement when we heard the 2 metre sig from YK3 will be long remembered. The party consisted of 3RIT, 3CR, 3AKR, 3BV, 3ALC, 3AGD, and associate member Tony Wilson. In four vehicles necessary to carry all the radio gear, camping equipment, provisions and (31s), we approached the mountain on Saturday evening and after exploring all the tracks, eventually arriving just as it got dark.

By 1030 hours next morning all was ready, then the fun started. The alternator would not take the strain of the big rig, then the 250 ohm ribbon started to give trouble on the beam. While taking it down, unfortunately Ken's head got in the way. However, each problem was tackled with febrile activity and after Kevin and Tony had tinkered with the engine of the alternator and made it play ball, we fixed the beam and started again. This time even well. The 40 metre link consisted of Type 3 Tx, Eddy-sons "649" Rx, window ant., and many good contacts were made. We were very pleased to work 3LY portable VK3 at Henley Beach. All present voted the trip well worth while, and decided to try it again sometime. So now that we have the best results next time should be really something to write about.

3IC brushing the dust off an ATS. 3AIC working some DX on c.w. and experimenting with break-in. 3AOL bumped power to 80 watts, also hopes to get on 80 with low power soon. 3APL on 40 after long silence, has portable rig working very nicely. 3BU modifying TAIBD striking a deal with his hopes. 3BIL worked Melbourne on 144 Mc. during the week, with sigs from there coming in like locals. 3ALD has been QRL and had little time for radio the past month. 3VZ and 3AKC complaining that 2 metres is dead at the moment, but 3BU heard them on the 9th. Nothing known of 3BW 3ABE and 3AT still going on 28, the latter on 19 for a while recently. 3AGN either busy with bush fire net or re-building.

GEELONG AMATEUR RADIO CLUB

Members of the above Club met once again on 2nd January for their first meeting for 1951, although only a few members were present due to the fact of quite a few being away on holidays, some very important business was discussed. The night was an open night and the gang had a real cheer on their activities. At the next meeting quite a bunch of the chaps turned up including a couple of visitors. The lecturer for the evening was club member, Jack Beckingham, A.M.I.R.E., who lectured on aircraft v.h.f. transmitters including the SCR552 and the TR143 and gave figures on their performance.

The next club night members organised another transmitter hunt. This is always popular with members so at 8.30 p.m. members set off to see whose loop would direct them to the hidden xmitter first. The xmitter was well hidden and difficult to find. The road which made it hard to find. The location was well planned and operated by 3AKE and 3WT who went as far as to put up a decoy antenna. First party to arrive at the location was 3BV, 3ABK, and 3ALG. They, however, were not fooled with the decoy and located the xmitter about 100 yards further away. Second party to arrive were 3APF, 3AOE, Keith Muller and Peter Cartwright quite some time after the winners.

NORTH EASTERN ZONE

3AT has new lazy H antenna for 40-30-10, good results on 20. Peter Williams, of Wangaratta, visited 3K. Peter has very high hopes that he passed his Morse test last exam, and is tied up with the intricacies of building stable V.L.O.s and freq. meter. 3KR now sounds like the B.B.C. with changes coming in on the hour, depending of course whether the inter-com. is switched on or off. Zene Bendix freq. meter in continual use over Benalla way, so much so that I think the writing must be read off the dial. 3APF is on 3 metres.

3ACK yacht making instead of planes. 3KZ leaving the tube; Bob has been working lately in the radio field. 3SB visited 3UI, both Sid and Alan, at Mt. Cooper, made several contacts on 8 and 2 including 3APF, 3AT and 3ALE. 3ALE now has plate modulation, sounds much better than previous reports indicate. Les also has new rocks ground for 50 Mc. 3APF on a meter to cover Portland district and visited 3DW at Woodend. 3AJO has a Type A Mark III. In pieces. Jack will have to replace

a fractured crystal before we hear him on. 3AT with the help of 3UI has a radio installed in his car. Now that 3AGC has an XYL, I can't even find him, let alone get a word in edgewise. Don't bite now, Marg 3HZ on annual leave.

3TV is back with us again after a sojourn in hospital. The results not too successful, 3m told 3KR contacting ex-zone member, 3DW, now at Woodend, best wishes from the zone Doug. 3FD in Melbourne. Andy's necker still in the works. In 3ACT has 6 metres gear, not ready to go; Stan has also been fooling around with 288 Mc. gear. 3TP out with 3UI and 3SD on v.h.f. field day, called in on 3UD on way home. 3PW visited 3VY 3KR still needing "E" meter in his crystal set. 3ABX now has XYL, how about a QSO with the gang one hook-up Vic? Most shacks were over the 180 degrees mark on hook-up. With all the hot air emitting from the same, it is my wonder. Thanks Howard for your solicitations on my behalf, but in all fairness to 3ALF and 3KR I must say that they supplied the bulk of the notes this month.

QUEENSLAND

Having lost or mislaid the original notes which were prepared for this column this month, I have had to rush around as quickly as 4HT works the DX to try and compile something to fill the space—fortunately the zone managers and Clare have forwarded plenty of news, so it doesn't really matter what goes in here, as the beginning of the Queensland notes. There was such a poor attendance and apparently lack of interest in the election, and officers that it was impossible to actually elect those who were nominated for the many posts. However, it was noted that few members other than the usual selection were prepared to shoulder the responsibility when put to the last and paid the honour of being nominated for a position.

For those of you who have so far taken this attitude, you are reminded that it is not only selfish, but is entirely unfair that a few should be obliged to carry your burdens year in and year out, if you have had no previous experience in any of the posts, you should jump at the opportunity to further your knowledge. After all we are only Amateurs anyhow. If we all held the same attitude that you do, the W.I.A., as far as Queensland is concerned, would soon cease to exist and before very long you

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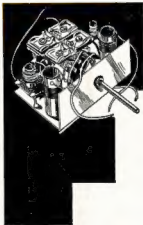
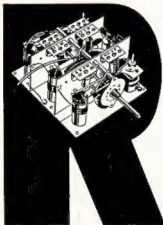
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